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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,856	11/08/2005	Akisuke Hirata	026390-00028	5744
4372	7590	04/21/2011	EXAMINER	
ARENT FOX LLP			DEO, DUY VU NGUYEN	
1050 CONNECTICUT AVENUE, N.W.				
SUITE 400				
WASHINGTON, DC 20036				
			ART UNIT	PAPER NUMBER
			1713	
			NOTIFICATION DATE	DELIVERY MODE
			04/21/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com  
IPMatters@arentfox.com  
Patent\_Mail@arentfox.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,856	<b>Applicant(s)</b> HIRATA ET AL.	
	<b>Examiner</b> Duy-Vu N. Deo	<b>Art Unit</b> 1713	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Sumitomo Electric Industries, Ltd. (JP 8-165582 A).

Patent from Sumitomo Electric Industries, Ltd describes a component comprising: a chrome plating layer on a base matrix material of Cu, or Cu alloy (claimed a first means or a metal layer electrochemically less noble than the matrix metal material) and gold plating layer on the chrome plating layer (claimed a second means or a second metal film layer electrochemically more noble than the matrix metal material). These metals would provide claimed reactions when dipped in a cleaning liquid since they carry the same electrochemistry properties as described above.

The limitations of describing the electrochemical property of the materials when dipped in a cleaning liquid are mental steps and since the cleaning liquid is not a part that makes up the component; they don't carry patentable weight.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation of “to advance dissolution of the first means” is vague because it is not clear what is meant by “advance dissolution”.

### ***Response to Arguments***

5. The first means and second means are interpreted as the first metal film and second metal film respectively. The first metal film is electrochemically less noble than the matrix metal material and the second metal film is more noble than the matrix metal material as described in page 3 of the specification.

Applicant's remark that Sumitomo doesn't describe a structure that performs the identical function is found unpersuasive because the interpretation of the first means and second means have been explained and the structure that provides claimed function also have been provided above. Applicant has not provided any scientific evidences that such structure would not provide claimed functions. Therefore, without any further evidences, applicant's merely assertion, which Sumitomo doesn't describe claimed structures that perform certain functions, is found unpersuasive.

Applicant's remark concerning the characters of each mean in the claim is acknowledged. However, there is still no evidence or facts showing the component described by Sumimoto would not necessary have the same characters as that of the claimed invention.

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Applicant's remark that the preamble of claim 6 is necessary to give life, meaning, and vitality to the claim 6 is found unpersuasive because the characters being described does not make up any concrete part or contribute to the structure of the component. The characters being described only show properties of the means which might or might not be happened since they also depend on other external factors such as current. Therefore, the preamble doesn't give life, or meaning, and vitality to the structure of the component. Furthermore, the preamble cites film forming equipment, and it appears the claim describes opposite action that is removal of a film layer of the thin film.

Applicant's remark that since the component of Sumitomo is not a component of a film forming apparatus for forming a thin film, he teach away from a structure to advance the dissolution of the chromium layer when exposed to a cleaning liquid is found unpersuasive because it is not clear that the structure needs to be a component of a film forming apparatus in order for the chromium layer to be dissolved in a cleaning liquid. Sumitomo teaches the same chromium layer; therefore, it would inherently have the same character as that of the claimed invention. Furthermore, given the broadest interpretation, equipment that the corrosion resistant electrically conductive member described by Sumitomo would be able to use to form any thin film of any kind, such as a thin film of epoxy layer.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy-Vu N. Deo whose telephone number is 571-272-1462. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duy-Vu N Deo/  
Primary Examiner, Art Unit 1792

4/18/11